

CLAIM AMENDMENTS

- 1 1. (Original) A wireless communications apparatus comprising:
2 a first antenna arrangement configured to transmit and receive communications
3 signals on a first communications channel within a first section of a spatial
4 area around the wireless communications apparatus, wherein the first antenna
5 arrangement is further configured to determine whether the first
6 communications channel is currently being used to carry communication
7 signals before transmitting any communication signals onto the first
8 communications channel; and
9 a second antenna arrangement configured to transmit and receive communications
10 signals on a second communications channel within a second section of the
11 spatial area around the wireless communications apparatus, wherein the
12 second antenna arrangement is further configured to determine whether the
13 second communications channel is currently being used to carry
14 communication signals before transmitting any communication signals onto
15 the second communications channel.
- 1 2. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first and second sections of the spatial area around the wireless communications
3 apparatus do not overlap and are not adjacent to each other.
- 1 3. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first and second sections of the spatial area around the wireless communications
3 apparatus are adjacent to each other.
- 1 4. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first and second sections of the spatial area around the wireless communications
3 apparatus are different sizes.

1 5. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first antenna arrangement is further configured to transmit and receive
3 communications signals on a third communications channel within the first section of
4 the spatial area around the wireless communications apparatus, wherein the third
5 communications channel is on a different frequency within the same frequency band
6 as the first communications channel.

1 6. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first antenna arrangement is further configured to transmit and receive
3 communications signals on a third communications channel within the first section of
4 the spatial area around the wireless communications apparatus, wherein the third
5 communications channel is in a different frequency band than the first
6 communications channel.

1 7. (Original) The wireless communications apparatus as recited in Claim 6, wherein the
2 first communications channel is in the IEEE 802.11(a) frequency band and the third
3 communications channel is in the IEEE 802.11(b) frequency band.

1 8. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first antenna arrangement is further configured to transmit and receive
3 communications signals on the first communications channel using a time division
4 multiple access communications protocol.

1 9. (Original) The wireless communications apparatus as recited in Claim 8, wherein a
2 carrier sense mechanism is used to select the first and second communications
3 channels.

- 1 10. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first antenna arrangement is further configured to determine whether the first
3 communications channel is currently being used to carry communication signals
4 before transmitting any communication signals onto the first communications channel
5 using a carrier sense mechanism.
- 1 11. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 wireless communications apparatus is a wireless access point communicatively
3 coupled to a wired network.
- 1 12. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first antenna arrangement and the second antenna arrangement are configured to allow
3 simultaneous separate communications on the first and second communications
4 channels.
- 1 13. (Original) The wireless communications apparatus as recited in Claim 12, wherein
2 the first and second communications channels are the same frequency.
- 1 14. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first and second antenna arrangements are configured with different polarization
3 orientations.
- 1 15. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first and second communications channels are selected to reduce interference between
3 the first and second sections.
- 1 16. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first and second antenna arrangements are configured to reduce interference between
3 the first and second sections.

- 1 17. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 wireless communications apparatus is configured to dynamically change the size of
3 the first section.
- 1 18. (Original) The wireless communications apparatus as recited in Claim 1, further
2 comprising a manager mechanism configured to aggregate data received from the first
3 and second antenna arrangements.
- 1 19. (Original) The wireless communications apparatus as recited in Claim 1, further
2 comprising a manager mechanism configured to, in response to a wireless device
3 moving from the first section into the second section, updating and storing data that
4 indicates that communications with the wireless device are now to be performed using
5 the second antenna arrangement.
- 1 20. (Original) The wireless communications apparatus as recited in Claim 1, further
2 comprising a switch configured to provide for the switching of data between the first
3 and second antenna arrangements.
- 1 21. (Original) The wireless communications apparatus as recited in Claim 1, further
2 comprising a switch configured to provide for the switching of data between the first
3 antenna arrangement and a network.
- 1 22. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 wireless communications apparatus is configured to selectively and separately manage
3 transmit power levels and receive sensitivities for the first and second antenna
4 arrangements.
- 1 23. (Original) The wireless communications apparatus as recited in Claim 1, wherein the
2 first antenna arrangement is configured to selectively and separately manage transmit
3 power levels on a per-wireless device basis.

1 24. (Currently Amended) A wireless access point for providing wireless access to a
2 wired network within a building, the wireless access point comprising:
3 a first antenna arrangement configured to communicate with wireless devices within a
4 first section of a spatial area around the wireless access point, wherein the first
5 antenna arrangement is further configured to determine whether a first
6 communications channel assigned to the first section of the spatial area is
7 currently being used to carry communication signals before transmitting any
8 communication signals onto the first communications channel;
9 a second antenna arrangement configured to communicate with wireless devices
10 within a second section of ~~[[a]]~~ the spatial area around the wireless access
11 point, wherein the second antenna arrangement is further configured to
12 determine whether a second communications channel assigned to the second
13 section of the spatial area is currently being used to carry communication
14 signals before transmitting any communication signals onto the second
15 communications channel; and
16 a management mechanism configured to manage the operation of the first and second
17 antenna arrangements and to manage the exchange of data between wireless
18 devices in the first and second sections of the spatial area and the wired
19 network in the building.

1 25. – 36. (Cancelled)

1 37. (Currently Amended) A wireless communications system comprising:
2 a first antenna arrangement having a first transceiver configured to transmit and
3 receive communications signals on a communications channel within a first
4 section of a spatial area around the wireless communications ~~apparatus~~
5 system;
6 a second antenna arrangement having a second transceiver configured to transmit and
7 receive communications signals on the communications channel within a
8 second section of the spatial area around the wireless communications
9 ~~apparatus~~ system; and
10 wherein a carrier sense multiple access, collision avoidance algorithm based on
11 carrier sense or energy detect, or a point coordinating function is used to allow
12 communications on the communications channel in both the first and second
13 sections to occur.

1 38. (Currently Amended) The wireless communications apparatus as recited in Claim ~~39~~
2 37, further comprising a network manager configured to control the transfer of data
3 between the first and second sections and a network.